Abstract

Automated Method for identifying landmarks within an image of the brain

A method is disclosed for obtaining the location of a landmark in an MR image of a brain. In a first step, a region of interest in a plane within the MR image containing the landmark is defined. In a second step, the ROI is binarised into foreground and background voxels based on at least one threshold selected using anatomical knowledge. In a third step a set of object voxels is identified from the foreground voxels, excluding voxels which were only classified as object due to proximity of cortical and non-cortical structures. This can be done by morphological processing which reclassifies voxels which may have been incorrectly classified as object, followed by restoring voxels due to the partial volume effect and/or morphological erosion/opening. In a fourth step, an automatic process is then carried out to identify one or more landmarks in the modified binarised image.

[Fig. 1]